IN THE CLAIMS:

Please amend claims 1-20 as follows:

LISTING OF CURRENT CLAIMS

1. (Currently Amended) A fluoropolymer ~~composite~~ blend with high ionic conductivity, applicable in the electroactive polymer composite, comprised by following components:

PVDF-g-SPS (styrene-grafted and sulfonated PVDF);

PVDF (polyvinylidene fluoride); and

Hydrocarbon-elastomer.

2. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 1, wherein ~~the manufacturing method for~~ the PVDF-g-SPS is ~~that the polystyrene styrene is grafted~~ made by grafting styrene onto the ~~main chain of the macromolecular of the~~ polyvinylidene fluoride ~~resin that is then ionized by sulfonyl group to become ionomer~~ followed by sulfonation.

3. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 1, wherein the fluoropolymer ~~composite~~ blend with high ionic conductivity ~~may be~~ is cross-linked by ~~any one of the two cross-linkers, that is, the compounds belonged to diamine or peroxide,~~ organic diamine or organic peroxide, and ~~the~~ an amount of the cross-linker is ~~around~~ between 0.5~5% of the entire weight of the ~~composite~~ blend, ~~and~~ the temperature of the cross-link is between 25°C to 200°C, and the pressure range is 0~500psi.

4. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 1, wherein ~~the~~ a number average molecular weight of the PVDF is between 80,000 and 350,000.

5. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 2, wherein ~~the~~ a degree of grafting ~~rate~~ for the styrene monomer onto the PVDF is between 10% to 100mole %, wherein the degree of grafting = $[m_1 - m_0] \times 100\%$, where m_0 is the mass of PVDF and m_1 is the mass of grafted PVDF.

6. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 1, wherein the hydrocarbon-elastomer ~~may be~~ is poly ethyl acrylate, ~~and its~~ having a number average molecular weight ~~is~~ between 100,000 to 300,000.

7. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 2, wherein ~~the~~ a degree of sulfonation ~~sulphonating rate~~ of the PVDF-g-SPS is between 30% and 100%.

8. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 7, wherein the degree of sulfonation ~~the sulphonating rate~~ of the PVDF-g-SPS is between 60% and 100%.

9. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 1, wherein ~~the~~ a weight ~~proportion~~ portion of the PVDF-g-SPS is between 10% to 60%, ~~the~~ a weight ~~proportion~~ portion of the PVDF is between 15% to 50%, and ~~the~~ a weight ~~proportion~~ portion of the hydrocarbon-elastomer is between 10% to 60%.

10. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 1, wherein the hydrocarbon-elastomer ~~may be~~ is an acrylic-elastomer, ~~such as: poly ethyl acrylate or the derivatives of other alkyl, and the adding amount proportion is~~ having a weight portion between 10% and 60% of ~~the~~ a weight of the total ~~composite~~ blend.

11. (Currently Amended) A fluoropolymer ~~composite~~ blend with high ionic conductivity, which is applicable in the electroactive polymer composite and is comprised by following three components:

PVDF-g-SPS (styrene-grafted and sulfonated PVDF);

PVDF (polyvinylidene fluoride); and

Fluoro-elastomer.

12. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 11, wherein the ~~manufacturing method for the~~ PVDF-g-SPS is ~~that the polystyrene styrene is grafted~~ made by grafting styrene onto ~~the main chain of the macromolecular of the~~ a polyvinylidene fluoride ~~resin that is then ionized by sulfonyl group to become ionomer~~ followed by sulfonation.

13. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 11, wherein the fluoropolymer ~~composite~~ blend with high ionic conductivity ~~may be~~ is cross-linked by ~~any one of the two cross-linkers, that is, the compounds belonged to~~ organic diamine or organic peroxide, and ~~the~~ an amount of the cross-linker is ~~around~~ between 0.5~5% of the entire weight of the ~~composite, and~~ blend, the temperature of the cross-link is between 25°C to 200°C, and the pressure range is 0~500psi.

14. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 11, wherein ~~the~~ a number average molecular weight of the PVDF is between 80,000 and 350,000.

15. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 12, wherein ~~the~~ a degree of grafting rate for the styrene monomer onto the PVDF is between 10% and 100mole %, wherein the degree of grafting = $[m_1 - m_0] \times 100\%$, where m_0 is the mass of PVDF and m_1 is the mass of grafted PVDF.

16. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 12, wherein ~~the sulphonating rate~~ a degree of sulfonation of the PVDF-g-SPS is between 30% and 100%.

17. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 16, wherein the ~~sulphonating rate~~ degree of sulfonation of the PVDF-g-SPS is between 60% and 100%.

18. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 11, wherein ~~the~~ a weight ~~proportion~~ portion of the PVDF-g-SPS is between 10% to 60%, ~~the~~ a weight ~~proportion~~ portion of the PVDF is between 15% to 50%, and ~~the~~ a weight ~~proportion~~ portion of the hydrocarbon-elastomer is between 10% to 60%.

19. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 11, wherein ~~the~~ a number average molecular weight of the fluoro-elastomer is between 80,000 and 2,800,000.

20. (Currently Amended) The fluoropolymer ~~composite~~ blend with high ionic conductivity according to claim 11, wherein the fluoro-elastomer ~~may be Viton or~~ is a polymer of vinylidene fluoride /hexafluoropropylene/tetrafluoroethylene, ~~and the proportion of its adding weight is~~ having a weight portion between 10% and 60% of ~~the~~ a weight of total ~~composite~~ blend.